

**Statement of William A Frey
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E.I. DuPont de Nemours and Company, Inc
before the
Committee on Agriculture
U.S. House of Representatives
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Good morning Chairman Goodlatte, ranking member Peterson and members of the committee. Thank you for the opportunity to testify before the committee today. My name is Bill Frey. I am the global business director for DuPont's biofuels business, and I am pleased to be able to tell you about our efforts to bring DuPont science to bear to add value throughout the biofuels value chain.

We start in the field, where our Pioneer corn and soybean seeds, developed specifically for biofuels applications, help to maximize the yield of ethanol and biodiesel from those crops. For eight decades Pioneer has been helping its customers succeed in the marketplace. With 135 seed corn varieties designated as high ethanol hybrids, renewable fuels are just one route to that success in today's market. Crop seeds represent the first step in DuPont's biofuels vision of meeting energy needs from the field to the pump.

Our highly environmentally sensitive crop protection chemicals help farmers to ensure high rates of productivity from these crops. And we have been bringing our biotechnology expertise to bear to convert those agricultural products to high value products for the marketplace. After two hundred years of using chemistry and materials science to produce products ranging from the invention of Nylon and Kevlar to high quality automotive paints, we are increasingly using biology as the tool to create similarly high value products from agricultural materials.

DuPont was recently awarded the President's Green Chemistry Award for the development of our Sorona fiber, whose unique properties include natural stain protection, brilliant colors and high wear resistance. This year we will start up a world scale fermentation facility in Loudon, TN producing the raw material for Sorona, propane diol or PDO, from corn. In developing our bio-PDO process we used biology to improve the yield of PDO by a factor of 500 fold, resulting in a cost competitive polymer raw material from corn, rather than petroleum. So very soon the carpet you walk on and the clothes you wear will come from the farmer's field.

We are also working with the Department of Energy and partners including John Deere and Diversa to develop an integrated corn-based biorefinery that will convert the entire corn plant, both the grain and the corn stalk and leaves, into cost effective ethanol and bio-PDO. We are nearing the stage where we will demonstrate this new technology on

the way to full-scale commercial status. We believe this new development will help improve earnings for farmers and ethanol producers. It will also open the door to significant expansion of biofuels production from plants, allowing for the expansion of their development without potential pressure on food crops, and improving even further the environmental performance of these materials.

I'd like to spend the rest of my time focusing on our newest development that we just announced last week. DuPont and BP have formed a partnership to develop and bring to market next generation biofuels that will help to speed the development of this important market in ways that will benefit farmers and biofuels producers, including ethanol producers.

The first of these new products to market will be biobutanol. Biobutanol will be produced from the same feedstocks from which ethanol is produced, in essentially the same type of production facilities. One of the things that make biobutanol exciting is its ability, as a co-blending agent with ethanol and gasoline, to enhance the performance of the fuel blend in ways that speeds the growth of the overall biofuels market and the agricultural markets that support it.

Biobutanol packs more energy per gallon than does ethanol, so when biobutanol is added to an ethanol-gasoline blend the resulting fuel provides greater fuel mileage. In addition, biobutanol is much less volatile than ethanol, and a co-blend of the two results in reduced volatile vapor emissions versus ethanol-gasoline blends, reducing the potential for smog formation. This will expand the geographic areas in which ethanol blended fuels can be used year round.

Butanol is not a new thing, but the ability to produce it cost effectively is. That is the power of DuPont's biology expertise brought to bear. Butanol's performance as a transportation fuel has long been recognized. It was, for example, used to fuel vehicles during World War II. However, until now butanol produced from petroleum or by known fermentation technologies has not been cost competitive with other transportation fuels. What is new is the application of the biology expertise we have developed through our experience with bio-PDO and the biorefinery efforts to the development of a cost effective process to produce butanol from agricultural products.

Also new is the partnership between DuPont's biology and production expertise and BP's fuel expertise and market presence. The partnership will begin biobutanol production in the UK in 2007 in conjunction with British Sugar, using existing technology, in order to get product to market rapidly. We are starting in the UK in order to have an early presence in a newly developing biofuels market, and will use sugar beets to produce biobutanol. By 2010 we expect to be producing with our new generation technology, including at a new UK plant based on wheat. This feedstock flexibility is one of the beauties of biobutanol. Here in the US we anticipate biobutanol will be produced from corn, with sugar beets or cane also potential feedstocks. In the future the cellulosic technology we are developing in the biorefinery project will be a natural fit with biobutanol.

While we don't yet have specific plans for US production, the US is obviously an important market and we fully intend for biobutanol production in the US when our next generation technology is ready. One factor that will be important for US market entry is a level playing field in incentives for biofuels, be they in tax policy or elsewhere. Biobutanol will be good for farmers, good for ethanol producers, and good for the environment, and should receive the same treatment as other biofuels.

DuPont is excited to partner with BP to bring biobutanol and other advanced biofuels to market. We think these developments will be good for agriculture, good for national security, good for the environment, and good for our shareholders. I appreciate the opportunity to share these developments with you, and look forward to your questions.